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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,992	05/24/2000	Vincenzo Arcella	108910-00006	4767

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EXAMINER

FORTUNA, ANA M

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 11/01/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-16

# Office Action Summary

Application No.  
09/576,992

Applicant(s)  
Arcella

Examiner  
Ana Fortuna

Art Unit  
1723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 19, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above, claim(s) 5, 8-15, 18, 20, and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 7, 16, 17, 19, 22, and 23 is/are rejected.
- 7) ☒ Claim(s) 4 and 6 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 112*

1. Claims 3, 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection was discussed in paper no.13, and still considered proper. Claim 3 although is limited to the groups of a, b, and c, A) is indefinite as to a mixture of the components of the formulas I, II, III, and IV is intended. The term "polymers made of monomers selected from the following" is unclear as to selected from polymers of the formula I, II, III, or IV alternatively, is intended.
2. Claims 5, 8-15, 18, 20 and 21 are **withdrawn** from consideration, since applicant elected Group 1, claims 1-7, and species including a monomer of the formula II where  $Y_1 = Y_2 = F$ , and the comonomer of the formula I, where  $X_1 = X_2 = F$  and  $Z = OCF_3$ .

### *Allowable Subject Matter*

3. Claims 4 and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The membrane of claim 4, including the mixture of

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monomer of the formula II, and the comonomer of the formula I, for the specific groups of Z and Rf, X1, X2, Y1, Y2, as claimed in claim 4 is not disclosed in the prior art of record.

***Claim Rejections - 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 5, 7, 16, 17, 19, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnerjee (5,795,668) (hereinafter '668). Reference '668, discussed in prior Office Actions disclose the membrane of claim 1 and combinations with dependent claims above. Claim 3 as amended in paper No.14 (filed 8/19/02), is directed to membranes made of polymers selected from the formulas I, II, III, IV, or copolymers of monomers having the structure I, III or IV. This limitations are covered by reference '668, since a membrane substrate made from the formula II, or the formula II in combination with the formula III, for Rf being a perfluoroalkyl radical having between C1 and C 5 radical (column 5, lines 15-60, and column 6, lines 8-49). '668 teaches the membrane support membrane as having a pore size 0.05 to 10 micrometers, and a porosity of about 50-95 %, '688 fails to disclose the pore size with respect to the value of the distribution maximum peak. The pore size in the present invention claimed to between 5 and 500 nanometer (0.0005 to 0.05 micrometers), are overlapped by the pore size of reference '688 , e.g.

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see lower range). If 90 % of the pores have pores of  $500 \pm 5$  nanometers (equivalent to 0.0505), or pores of  $500 \text{ nm} - 5 \text{ nm}$  (equivalent to 0.495), in both instances the pore size is slightly over the lower range of pore size of substantially closed, e.g. in the case of 0.495) to the lower range of pore size of reference '688, and within the same percentage of porosity. Reference '688 fails to disclosed the method of determining the pore size, however, the claims are directed to a product or membrane. Therefore, although the pore size is not determined with relation to the distribution pick, it is evident that the membrane with the same pore size range and porosity percentage is obtained, or it is obvious to one skilled in the art at the time the invention was made, as determined by the calculations above. As to claim 5, the dioxole of the formula 1 is disclosed in reference '688, including a composition between 65 to 99 mole percent (column 5, lines 41-55). As to claim 7, the monomers of the formula II as claimed in claim 7, e.g. PTFE, is disclosed in reference '688 (column 5, lines 29-40). As to claims 16, and 23, the use of the membrane to separate a solute or particles containing in a solution (liquid), or a gas, is disclosed in reference '688 (column 11, lines 45-50). As to claim 17, pore sizes of 100 nm (0.01 micrometer) are not disclosed, however, controlling the pore size by controlling the amount of pore forming agent to a desired pore size, it would have been obvious to one skilled in the art at the time the invention was made (note process of making the membrane by including pore forming into the membrane material, column 7, lines 37-43). As to claims 19 and 22, PTFE, as discussed above is discussed above, as disclosed by '688 (column 5, lines 19-60).

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***Response to Arguments***

6. Applicant's arguments filed 8/19/02 have been fully considered but they are not persuasive. The claims in the above rejection have been more clearly classified based on the elected species, as selected in paper no8, filed on 7/18,2001. As result, claims 4 and 6 are allowed if combined with the limitations for claims 1 and 3, as directed to the specific groups of claim 4. As to the term "porosity" have been interpreted as pore size, since a dimension in nanometers is provided. A correction to the term in the specification, to be in accordance with the amended claims is required.

7.Applicant's arguments is again pointing to A) as monomers made from I, II, III, IV, and not from I, II, II, or IV, or selected from the group consisting of I, II, II, and IV.

8.applicant also point out that the membrane of his invention is made by a less expensive industrial process. Applicant should direct comments to the product, and not to the process of making, since the claims are directed to a membrane or product, which is not limited by the process of making, but by its composition and structure. On paper No. 12, filed on 2/28/02, Applicant also direct his response to the membrane made by a different process; and in specification, page 14, second paragraph, Applicant compare the product of the invention to GORETEX (r) foam products, but obtained by a simplified process. Again, the claims are directed to the product or

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“membrane”, and not to a particular process, and the properties claimed for the membrane can be achieve by another process, e.g. as the process of reference ‘688.

### *Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

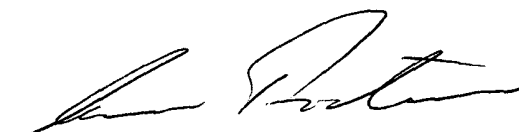
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for regular responses, and (703)872-9311 for after finals.

Ana Fortuna

October 29, 2002



**ANA FORTUNA**  
**PRIMARY EXAMINER**